

INTERNATIONAL SEARCH REPORT

Intern: Application No

PCT/US2004/021452

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61L31/16 A61P41/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61L A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, BIOSIS, EMBASE, WPI Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2002 085549 A (TERUMO CORP) 26 March 2002 (2002-03-26)	1-8, 10-21, 23-25
X	paragraphs [0039] - [0043]; claim 5 & DATABASE PAJDETAIL [Online] JPO; computer translation of JP 2002 085549 14 December 2004 (2004-12-14), ANONYMOUS: "JP 2002 085549 A" retrieved from HTTP://WWW4.IPD.L.NCIPI.GO.JP/TOKUJITU/PAJD ETAIL.IPD.L Database accession no. JP,2002-085549,A abstract paragraphs [0039] - [0043] Claim 5 ----- -/--	1-8, 10-14, 17-21, 23-25

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

15 February 2005

Date of mailing of the international search report

18. 05. 2005

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

Intern: Application No
PCT/US2004/021452

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 00/10552 A (GLOBAL VASCULAR CONCEPTS INC) 2 March 2000 (2000-03-02)</p> <p>page 3, line 31 - line 32 page 5, line 25 page 6, line 8 - line 12 page 7, line 11 - line 12 claims 1,3-9</p> <p>-----</p>	<p>1-8, 10-21, 23-25</p>
A	<p>MEINERS SILKE ET AL: "Ubiquitin-proteasome pathway as a new target for the prevention of restenosis" CIRCULATION, vol. 105, no. 4, 29 January 2002 (2002-01-29), pages 483-489, XP001204379 ISSN: 0009-7322 abstract page 486, right-hand column, paragraphs 2,3</p> <p>-----</p>	<p>1-8, 10-21, 23-25</p>
A	<p>ADAMS J: "Proteasome inhibitors as therapeutic agents" EXPERT OPINION ON THERAPEUTIC PATENTS 01 JAN 2003 UNITED KINGDOM, vol. 13, no. 1, 1 January 2003 (2003-01-01), pages 45-57, XP002310609 ISSN: 1354-3776 the whole document</p> <p>-----</p>	<p>1-8, 10-21, 23-25</p>
A	<p>US 5 780 454 A (GRENIER LOUIS ET AL) 14 July 1998 (1998-07-14) cited in the application the whole document</p> <p>-----</p>	<p>1-8, 10-21, 23-25</p>
A	<p>US 2002/188037 A1 (CHUDZIK STEPHEN J ET AL) 12 December 2002 (2002-12-12) the whole document</p> <p>-----</p>	<p>15,16</p>

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2004/021452

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 1-8, 10-21, 23-25 (partially)
because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 20, 21, 23-25 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.: 1-8, 10-21, 23-25
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
8, 24, 25 (entirely); 1-7, 10-21, 23 (partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Although claims 20,21,23-25 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box II.1

Claims Nos.: 1-8,10-21,23-25 (partially)

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery

Continuation of Box II.2

Claims Nos.: 1-8,10-21,23-25

Present claims 1-8,10-21,23-25 relate to a product/compound/method/apparatus defined by reference to a desirable characteristic or property, namely to inhibit the proteasome. The claims cover all products/compounds/methods/apparatus having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such products/compounds/methods/apparatus. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the product/compound/method/apparatus by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the products/compounds/methods/apparatus that are peptide borates (see claim 10) such as bortezomib.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

out during examination before the EPO (see EPO Guideline C-VI, 8.5),
should the problems which led to the Article 17(2) declaration be
overcome.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 8,24,25 (entirely); 1-7,10-21,23 (partially)

Stents with a proteasome inhibitor incorporated, where the proteasome inhibitor is a peptide borate, e.g. bortezomib.

2. claims: 1-7,9,11-21,23 (partially)

Stents with a proteasome inhibitor incorporated, where the proteasome inhibitor is a C-terminal peptide aldehyde (see claim 9).

3. claims: 1-6,9,11-17,19-21 (partially)

Stents with a proteasome inhibitor incorporated, where the proteasome inhibitor is lactacystin.

4. claims: 1-6,9,10-17,19-21 (partially)

Stents with a proteasome inhibitor incorporated, where the proteasome inhibitor is a peptide epoxyketone such as epoxomicin.

5. claims: 1-6,10-17,19-21 (partially)

Stents with a proteasome inhibitor incorporated, where the proteasome inhibitor is a peptide vinyl sulfone.

6. claims: 1-6,10-17,19-21 (partially)

Stents with a proteasome inhibitor incorporated, where the proteasome inhibitor is epigallocatechin-3-gallate.

7. claims: 22 (entirely); 20,23,24 (partially)

Injection catheters for the local administration of proteasome inhibitor to treat restenosis.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2004/021452

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 2002085549	A	26-03-2002	NONE	
WO 0010552	A	02-03-2000	AU 5687199 A WO 0010552 A2	14-03-2000 02-03-2000
US 5780454	A	14-07-1998	US 6083903 A US 6066730 A US 2002173488 A1 US 6617317 B1 US 2003199561 A1 US 6297217 B1 US 2004167332 A1 US 6465433 B1 AT 241631 T AU 710564 B2 AU 4139896 A CA 2203936 A1 CA 2496538 A1 CN 1168633 A DE 69530936 D1 DE 69530936 T2 DK 788360 T3 EP 1312609 A1 EP 0788360 A1 ES 2199257 T3 FI 971746 A HK 1002059 A1 IL 115790 A IL 133831 A IL 137726 A JP 10510245 T LU 91083 A9 NL 300151 I1 NO 971929 A NZ 296717 A NZ 337211 A PT 788360 T WO 9613266 A1 FI 20041415 A ZA 9509119 A	04-07-2000 23-05-2000 21-11-2002 09-09-2003 23-10-2003 02-10-2001 26-08-2004 15-10-2002 15-06-2003 23-09-1999 23-05-1996 09-05-1996 09-05-1996 24-12-1997 03-07-2003 26-02-2004 22-09-2003 21-05-2003 13-08-1997 16-02-2004 06-06-1997 05-09-2003 01-12-2002 28-03-2004 31-08-2004 06-10-1998 09-08-2004 02-08-2004 12-06-1997 29-11-1999 22-12-2000 31-10-2003 09-05-1996 03-11-2004 27-05-1996
US 2002188037	A1	12-12-2002	US 2002032434 A1 US 6344035 B1 US 6214901 B1 AU 2003251570 A1 CA 2490241 A1 WO 03105920 A1 US 2003031780 A1	14-03-2002 05-02-2002 10-04-2001 31-12-2003 24-12-2003 24-12-2003 13-02-2003

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